

**REMARKS**

The Office examined claims 1, 3-7, 9-11, 13-17, 19-21 and rejected same. With this paper, claims 3, 7, 9 and 10 are amended, claims 1, 2, 4-6, 11, 13-16 and 18-21 are canceled, and none are added. The application now includes claims 3, 7, 9, 10 and 17.

**Claim Rejections under 35 USC §112**

The Office rejected claims under 35 USC 112 based on the following grounds:

*1. Claims 20 and 21 are rejected under 35 USC 112, first paragraph, as failing to comply with the enablement requirement.*

With this paper, claims 20 and 21 are canceled.

*2. Claims 3-7, 11, 13-17 and 19-21 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.*

With this paper, claim 3 is amended into an independent claim and claim 1 is canceled. It is believed the basis for the rejection is obviated with the amendment. Withdrawal of the rejection is respectfully requested.

**Claim Rejections under 35 USC §103**

The Office rejected claims under 35 USC 103 based on the following grounds:

*1. Claims 1, 3-7, 9-11, 13-17 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishiguchi et al. (JP 09-324096, Nishiguchi hereinafter) in view of Hirata et al. (JP 2001-316491, Hirata hereinafter).*

*2. Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishiguchi in view of Hirata and further in view of Nishiguchi et al. (JP 10-060207).*

With this paper, claim 3 is amended into an independent claim and claim 1 is canceled. Claim 3 is the only remaining independent claim of this application.

The amended claim 3 recites a polyvinyl alcohol film formed from a resin composition. The resin composition comprises: (A) a polyvinyl alcohol resin, (B) 0.1 to 50 parts by weight of an inorganic filler per 100 parts by weight of the polyvinyl alcohol resin (A), and (C) 0.1 to 50 parts by weight of a plasticizer per 100 parts by weight of the polyvinyl alcohol resin, the plasticizer contains trimethylolpropane. Claim 3 further specifies that the polyvinyl alcohol resin (A) comprises: a first polyvinyl alcohol resin (a1) having a degree of hydrolysis of not less than 55% by mole to less than 82% by mole, and a second polyvinyl alcohol resin (a2) having a degree of hydrolysis of not less than 82% by mole to not more than 99.99% by mole. A ratio of the first polyvinyl alcohol resin (a1) to the second polyvinyl alcohol resin (a2) is from 55/45 to 80/20 by weight. A difference in degree of hydrolysis between the first polyvinyl alcohol resin (a1) and the second polyvinyl alcohol resin (a2) is at least 3% by mole. The polyvinyl alcohol film dissolves in water at 20°C within 10 minutes, has an  $\alpha/\beta$  ratio of not more than 10, in which  $\alpha$  is a storage modulus of the film at 20°C in a dry atmosphere and  $\beta$  is a storage modulus of the film at 20°C and 80% RH, and a glass transition temperature of not more than 20°C.

Nishiguchi discloses a water-soluble polyvinyl alcohol film that is excellent in low-temperature solubility. The film is made with a polyvinyl alcohol (PVA) resin composition which comprises a modified PVA resin (component B) and a denaturation PVA resin (component A). The component A has a degree of saponification of 70-99 mol.%. The weight ratio of the modified PVA resin to the PVA resin is 95:5-5:95 (Abstract). The component B has a degree of saponification of 70-99 mol.%, preferably 80-95 mol.% (paragraph [0019]). However, Nishiguchi does not specifically teach that the degree of hydrolysis (i.e. saponification) should be different for the first PVA resin (component A) and the second PVA resin (component B), and the difference in degree of hydrolysis (saponification) between the component A and the component B should be at least 3% by mole.

Also, as the Office has acknowledged, Nishiguchi does not specifically disclose that the resin composition contains 0.1 to 50 parts by weight of trimethylolpropane as a plasticizer (page 5, lines 4-5 of the Detailed Action). Additionally, Nishiguchi does not disclose an inorganic filler (B) in the polyvinyl alcohol resin composition.

The second reference, Hirata, discloses using e.g. trimethylolpropane as a plasticizer for a polyvinyl alcohol film (paragraph [0026]). The preferred content of the plasticizer is 1 to 30% by weight in the polyvinyl alcohol film (paragraph [0027]). The Office then asserts that: "Both references are analogous art because they are from the same field of endeavor concerning water-soluble film comprises a polyvinyl alcohol and a plasticizer." (Page 5, lines 12-13 of the Detailed Action) Applicant respectfully disagrees with the assertion.

The present invention, like Nishiguchi, pertains to a polyvinyl alcohol film that is excellent in low temperature water solubility for use in water-soluble packaging. In cold water, the film completely dissolves in a short time. Hirata, on the other hand, pertains to a polyvinyl alcohol film that is suitable for a polarizing film. The polarizing film has very low water solubility. When 100 cm<sup>2</sup> of such film is left to stand in 1 liter of water of 50°C for 4 hours, the dissolved amount of polyvinyl alcohol is only 1-100 ppm (Abstract).

The polyvinyl alcohol film of Hirata is composed of only one kind of polyvinyl alcohol resin. Hirata teaches the saponification degree of the polyvinyl alcohol resin is preferably more than 97 mol. %, more preferably more than 98 mol. %, still more preferably more than 99 mol. %, and especially most preferably more than 99.5 mol. % (paragraph [0012]). Because the object of Hirata's invention is to supply a polyvinyl alcohol film for using as a polarizing film, extremely low water solubility of the film is required. The higher the saponification degree of the polyvinyl alcohol resin (closer to 100 mol. %), hence the lower the solubility, the better.

Therefore, these two references are clearly not analogous art from the same field of endeavor, and they teach away from each other. There is no motivation, suggestion, or expected success in combining Nishiguchi with Hirata.

Based on the above, the amended claim 3 is patentable over Nishiguchi in view of Hirata. Withdrawal of the rejection is respectfully requested.

Other claims depend directly or indirectly from claim 3. Since claim 3 is patentable, these claims are also patentable at least due to their dependency. Applicant respectfully requests the rejections under 35 USC 103(a) be reconsidered and withdrawn.

**Conclusion**

For all the foregoing reasons, it is believed that all the claims of the instant application are patentable, and their passage to issue is earnestly solicited. Applicant's agent urges the Examiner to call to discuss the present response if anything in the present response is unclear or unpersuasive.

Date: \_\_\_\_\_

4/23/2008

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Respectfully submitted,



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